



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,838	02/17/2004	Richard A. Bye	BP2970.1	9175
51472 7590 09/25/2008 GARLICK HARRISON & MARKISON P.O. BOX 160727 AUSTIN, TX 78716-0727				
EXAMINER				
PATEL, HEMANT SHANTILAL				
ART UNIT		PAPER NUMBER		
2614				
MAIL DATE		DELIVERY MODE		
09/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/779,838

Applicant(s)

BYE, RICHARD A.

Examiner

HEMANT PATEL

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's submission filed on June 26, 2008 in response to office Action dated march 26, 2008 has been entered. Claims 1-12 are pending in this application.

Response to Amendment

2. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection. The rejections are necessitated due to claim amendments.

3. Applicant's election without traverse of claims 1-12 in the reply filed on June 26, 2008 is acknowledged.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US Patent Application Publication No. 2001/0036190 A1), and further in view of Shah (US Patent No. 7,307,980 B1).

Regarding claim 1, Takahashi teaches of an apparatus, comprising:

a first network interface coupled to service packetized communications with at least one Voice over Internet Protocol (VoIP) terminal (Fig. 3 item 5) within a first network to service packetized communications (Fig. 4 item 21);

a second network interface coupled to service the packetized communications via a second network (Fig. 4 item 23);

a processor coupled to the first network interface and to the second network interface (Figs. 4, 16 item 22); and

wherein:

the processor determines a communication signature for each of the packetized communications (Fig. 4, item 22 containing item 41);

the processor determines, based upon a corresponding communication signature, whether a packetized communication is a real-time communication (Fig. 4, item 22 containing item 42) (Paragraphs 0047-0049, 0067-0088, 0092-0096, 0111-0121).

Takahashi does not teach a programmable codec coupled to the processor and employing a corresponding coding scheme to encode or decode each of the packetized communications, and the processor monitoring a service level currently supported for the real-time communication in at least **one of** the first network and the second network; and also does not teach when the service level is below a minimum service level, the programmable codec changes a coding scheme by which the real-time communication is encoded or decoded therein.

However, in the same field of communication, Shah teaches of an apparatus (Fig. 1) supporting VoIP real-time communication (col. 4 ll. 44-col. 5 ll. 25) using programmable codec (col. 5 ll. 26-col. 6 ll. 42), monitoring the service level of this real-time packetized communication compared to minimum service level (threshold), and when the service level is below minimum service level, the programmable codec changes the coding scheme for the real-time communication during the same call (col. 7 ll. 22-64) (col. 4 ll. 26-col. 10 ll. 26).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Takahashi to include programmable codec and dynamically adjust its coding scheme as per the quality of service level for the real-time communication during the call as taught by Shah "for employing dynamically varying compression techniques, either manually or automatically, in packet switching network environments allowing for adjustments to be made by varying the compression technique in accordance to the usage of the network" (Shah, col. 3 ll. 31-36).

Regarding claim 2, Shah teaches wherein:

the programmable codec employs a first coding scheme to encode or decode a first packetized communication of the packetized communications (one coding scheme before congestion or before user selecting to change coding); and

the programmable codec employs a second coding scheme to encode or decode a second packetized communication of the packetized communications (second coding scheme after renegotiation and switching to another codec type after congestion

detection or after user selection) (col. 7 ll. 22-col. 9 ll. 49) (also col. 9 ll. 50-col. 10 ll. 26 switching between voice mode and fax mode).

Regarding claim 10, Takahashi teaches the real-time packetized communication is an audio communication (Paragraph 0054 and elsewhere in the art). Also, Shah teaches the real-time packetized communication is an audio communication (col. 4 ll. 44-col. 5 ll. 16).

6. Claims 3, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Shah as applied to claim 1 above, and further in view of Skemer (US Patent No. 6,570,849 B1).

Regarding claims 3, 5, Takahashi teaches of identifying between real-time communication (voice packets) and non real-time communication (data packets) but Takahashi and Shah do not teach of reducing the service level of non real-time communication relatively lower than a service level of the real-time communication.

However, in the same field of communication, Skemer teaches of a gateway prioritizing real-time and non-real-time data and reducing the service level of non-real-time data relative to the real-time data (col. 8 ll. 36-57; col. 11 ll. 53-col. 12 ll. 60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Takahashi and Shah to prioritize real-time and non-real-time data and reducing the service level of non-real-time data relative to the real-time data as taught by Skemer in order to provide "Voice over IP (VoIP) gateways that

provides voice Quality of Service (QoS) comparable to the Time Division Multiplexing (TDM) realm of traditional telephony" (Skemer, col. 5 ll. 32-35).

7. Claims 3, 5, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Shah as applied to claim 1 above, and further in view of Leung (US Patent Application Publication No. 2002/0087711 A1).

Regarding claims 3, 5, 11, 12, Takahashi teaches of identifying between real-time communication (voice packets) and non real-time communication (data packets) but Takahashi and Shah do not teach of reducing the service level of non real-time communication relatively lower than a service level of the real-time communication, or prioritizing real-time communication over non real-time communications, or audiovisual communication for conferencing.

However, in the same field of endeavor, Leung teaches of a gateway and a method wherein the gateway uses various codecs to process audio and video packetized communication and reduces the service level of non voice packets by prioritizing voice communication packets over other packets for any communication including conferencing (Paragraphs 0042-0046, 0051-0053, 0061-0062).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Takahashi and Shah to include various codec capabilities in the programmable codec to process audio and video packetized communication and to reduce the service level of non voice packets by prioritizing voice communication packets over other packets for any communication including conferencing as taught by

Leung in order to provide "the ability to optimize voice packets and give them an optimal number of network resources so that they proceed with less interference and delay to their destination" (Leung, Paragraph 0014) and to provide "the ability to increase the number of calls possible during traffic levels that are below the normal range" (Leung, Paragraph 0015).

8. Claims 4, 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Shah as applied to claim 1 above, and further in view of Murphy (US patent No. 6,282,192 B1).

Regarding claim 4, Takahashi and Shah do not teach of first and second servicing networks as part of the second network and routing the real-time communication via the second servicing network if the service level of real-time communication supported via the first servicing network is below the minimal service level.

However, in the same field of endeavor, Murphy teaches of the first servicing network (Fig. 1 item 20) and the second serving network (Fig. 1 item 18) as part of the second network (the network connecting gateways Fig. 1 items 12, 22) and rerouting the real-time communication (voice call) between PSTN and VoIP network according to the quality of service for the voice call on VoIP network (Figs. 1-19 and their descriptions).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Takahashi and Shah to route call to alternative networks

depending on the quality of service for the voice call on VoIP network as taught by Murphy in order to satisfy "many customers request features that place VoIP calls back out on the traditional circuit switched network (hairpinning) when there is IP network congestion or an IP network failure" (Murphy, col. 1 ll. 34-37) by ensuring "a more effective way to provide VoIP call fallback" (Murphy, col. 5 ll. 32-35).

Regarding claim 6, Takahashi teaches of receive signature corresponding to communication received from a corresponding VoIP terminal via the network interface (Paragraphs 0085-0096). Shah teaches of a pair of communication signatures for packets in both directions (col. 7 ll. 22-54). Murphy teaches of a transmit signature corresponding to communications received via the backbone interface and intended for the corresponding VoIP terminal (Figs. 2-3, 10-12 and their corresponding descriptions; gateways receiving VoIP packets with congestion information from VoIP network).

Regarding claim 7, Takahashi teaches of using the receive signature to determine whether the packetized communication is the real-time communication (Paragraphs 0085-0096).

Regarding claim 8, Takahashi teaches of analyzing receive signature to determine whether the packetized communication is a real-time communication but does not teach of using it for determining problem with VoIP network interface. However, Murphy teaches of analyzing packet signature to determine the problem with the packet sender (Figs. 2-3, 10-12 and their corresponding descriptions; gateways analyzing received VoIP packets for congestion information of sending side). It would have been obvious to a person ordinarily skilled in the art to use the packets received

from the network interface to determine problem on the network interface side. In Murphy, the analysis by gateway (Fig. 12 item 108) of packets from Endpoint #1 (Fig. 12) inherently indicates the problem with VoIP network interface (network interface for Endpoint #1 directly connecting to IP network). Also, Shah teaches of analyzing receive signature to determine the problem with the apparatus (col. 7 ll. 22-54 timestamp, sequence number).

Regarding claim 9, Takahashi teaches of the transmit signature indicating problem with other links of communication path (Figs. 2-3, 10-12 and their corresponding descriptions; gateways receiving VoIP packets with congestion information from VoIP network). Also, Shah teaches of using transmit signature to indicate the problem with the apparatus (col. 7 ll. 22-54 timestamp, sequence number).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,356,545	Vargo	
US Patent Application Publication No. 2002/0146001		Fushimi
US Patent No. 6,765,931	Rabenko	
US Patent No. 7,023,839	Shaffer	
US Patent No. 7,068,601	Abdelilah	
US Patent No. 7,167,451	Oran	

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HEMANT PATEL** whose telephone number is (571)272-8620. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fan Tsang/
Supervisory Patent Examiner, Art Unit 2614

Hemant Patel
Examiner
Art Unit 2614

/Hemant Patel/
Examiner, Art Unit 2614